

Claims

I Claim:

- 1 This repairable plastic pallet is the first of it's kind.
2. A. This pallet is made from High Density Polyethylene (HDPE) and/or Polypropylene (PP),
virgin or recycled material.

B. Also, I am using a blowing agent and/or a gas which is all blended together during the
injection molding process.

C. The blowing agent or gas used in small percentage (%) makes repairable plastic pallet
lighter and stronger.

D. Other forms of plastic or other materials may sometime in the future be used.
3. This repairable plastic pallet consists of 2 molded parts. 1) A runner/rail (fig.4)

2) board/slat (fig 5&6).

1 A) A runner/rail (fig.4) is solid on both ends.

B) Ribbed out along both sides to help reduce weight. See figs.1,2 & 3.

C) There are molded on pegs top & bottom (fig.4) one of every 2 pegs are slightly larger (not
shown in any figures) for correct board mounting.

D) There is also a molded on plastic locking device located between each pair of pegs (not
seen on fig.2, but visible on fig.2-A) used to secure board/slat (fig.6) in place.

E) The height of the molded on locking device is approximate 1/16" , which could increase or
decrease.
- 2 A) A board/slat see fig. 5 & 6.

B) Smooth on top (fig.1) and ribbed out on bottom (fig.2).

- C) Each board (fig.5 & 6) has holes which are in line with the pegs on the runners/rails (fig.1)
 - D) Each hole slightly larger round on each side of board/slat (fig.6). One hole “in board/slat” is larger than the other hole “in board/slat” (not really noticeable in fig.6) fits over head of peg. (The difference for hole sizes is for assurance of proper board mounting).
 - E) The slightly smaller end of each hole (fig.6) is tapered for the head of the peg to rest in.
 - F) The slot for the molded on plastic locking device can be seen on top & bottom of fig.5., but only seen from the bottom of fig.6. (Hidden).
 - G) Boards/slats (fig.5 & 6) can be mounted only in one direction.
 - H) After board/slat (fig.6) is mounted, molded on locking device secures the board/slat (fig.6) into position.
- 4) Pallet assembled- Fig.1.
- A) Illustration shows pallet assembled with notched runner/rail (fig.1) used with a four-way entry for a forklift.
 - B) A straight runner can be used in the place of a notched runner/rail (fig.4). Now the assembled pallet becomes a two-way entry pallet.
- 5) This pallet can be shipped either assembled or unassembled depending on customers request.
- 6) This pallet is made of 100% plastic blended with a foaming agent and /or gas.
- A) No heat, screws and/or mechanical screws, clips, lugs , plates, flanges, hinges, bolts, nuts, nails, plastic nails, adhesives, ultra-sonic welding, or press-fitting are necessary for the assembly of this repairable plastic pallet.
 - B) No tools are required for assembling/disassembling of this repairable plastic pallet.
 - C) The only requirements needed to assemble/disassemble this repairable plastic pallet are

your hands.

- 7) This repairable plastic pallet can be repaired on the job-site, never required to be sent back to the factory for repairs.

Comparisons of other U.S. Patent Documents

This section will compare my repairable plastic pallet with other inventors who have already obtained a U.S. Patent for their pallet. My invention “a repairable plastic pallet” appeared to have some similarities between seven other inventors according to the U.S. Patent and Trademark Office. Below I will describe/ compare a difference and/or differences between six other individuals vs. my invention “a repairable plastic pallet”.

1) Changize Sadr-US 5,417,167– This pallet requires a screw or screws to fasten a deck board onto a stringer. Also the use of clamps or lugs are used within the pallet, and a tool (which will damage the board) is required for disassembling the pallet.

2) David A. Schrage-US 5,365,859– This pallet uses plastic nails or heat stake to fasten slats to rails. By using plastic nails in this pallet can reduce or eliminate press fit or heat stake procedures.

3) Isle Belle -US 5,456,189–This is a collapsible pallet that uses a ultrasonically welded cup and/or other conventional securing means.

4) Michael Stolzman-US 5,458,069–This pallet uses a tool for rotating and engaging the nut with a threaded post. The posts are ultrasonically welded to the cross members.

5) Morris Herring-US 5,941,179–Describes a pallet that uses blocks and mentions the need to press fit the board onto the runner.

6) Robert Morgan IV-US 5,440,998– Uses the following fastening methods on his pallet: The employment of a mechanical screw in spike /stud, uses a drive rivet to cap the spike after board mounting, and hot upset of the integral spikes/studs. Also, a supplemental adhesive applied at flat surface adjacent to spike/stud is recommended for safety precautions. Pallet must be sent

back for repairs.

My “repairable plastic pallet” is different in several aspect as compared to the previous mentioned patents. The board mounting process on my pallet uses a molded on locking device for securing a board in place, unlike the above mentioned patents, theses pallets use (s) other means of board fastening. The runner/rail pegs are designed to rest into the board, eliminating the need for additional means of securing. Finally, my pallet can be assembled/disassembled and repaired on site.